I would like to thank the authors for their answers and revised article. The authors have mostly responded correctly to my comments and I only have a few remaining comments regarding the revised text:

Response: The authors appreciate your follow through and continued work to improve our manuscript. The text has been edited to reflect the reviewers comments and for clarity. The reviewers comments are addressed below and further revisions are highlighted in **bold** in the text.

Comment 1: The response to Comments 1 and 5 is not correct. Page 2, Line 38: You have added "Alternatively, constant eddy viscosities can be modeled with a scalar function tuned to the turbulent production and dissipation of calibration flow (van der Laan et al., 2015)". This work does not consider a constant eddy viscosity as your text suggests. Instead, the standard $k-\varepsilon$ model definition of the eddy viscosity, $\nu_T = C_\mu k^2/\varepsilon$, is multiplied by a variable scalar function, $f_P : \nu_T = f_P C_\mu k^2/\varepsilon$. This f_P function acts as a turbulence length scale limiter in the near wake; the resulting eddy viscosity is a three dimensional scalar variable.

Response: Thank you for bringing this up, our interpretation was based on selecting a global Rotta constant to tune f_P. However, we recognize this neglects the local flow dependence captured by $\sigma/\tilde{\sigma}$. We have revised the text accordingly:
"Alternatively, a three-dimensional eddy viscosity can be modeled with a scalar function tuned to the turbulent production and dissipation of calibration flow (van der Laan et al., 2015; van der Laan and Andersen, 2018). This scalar functions acts as a turbulence length scale limiter which allows the model to represent localized behavior in the near wake and at the wake edges as well as improving velocity deficit estimation."

Comment 2: The LES case description is more clear now. The only two things I am still missing is the ambient turbulence intensity (based on TKE) at hub height for each turbine case and the value of the applied roughness length at the ground.

Response: Thank you for these suggestions, we have specified surface roughness and TKE based turbulence intensity in the text:
"A neutral atmospheric boundary layer inflow was generated with a $20,000$ second precursor simulation on each base domain with a hub-height inflow velocity of 8 ms^{-1} and a surface roughness of 0.15 m. Hub-height turbulence intensities were computed from turbulent kinetic energy and averaged from $x/D = -0.25$ to $x/D = -1.25$. The mean turbulence intensity for the 15 MW cases was $6.2 \pm 0.3\%$ and the mean turbulence intensity for the 1.5 MW cases was $8.4 \pm 0.2\%$."

Comment 3: Page 8 , Line 177: The revised derivation of the analytic eddy viscosity is more clear now, but it still contains a wrong reference to an equation. You write: "A is determined by performing a scale analysis on the eddy viscosity hypothesis in which each component of Eq. (2) is written in terms of their respective units". I think Eq. (2) should be Eq. (3).

Response You are correct, thank you.